

AVAKYAN, S. V.

PA 20/49T28

USSR/Electricity
Circuit Breakers
Switches, Cutoff

Dec 48

"Experimental Study of the Speed of Oil Discharge in
Relation to the Pressure in the Lower Part of the
Arc Quenching Device of a Type MGF-11 Oil Cutoff
Switch," S. V. Avakyan, Engr, Leningrad Polytech
Inst imeni M. I. Kalinin, 2 $\frac{1}{4}$ pp

"Vest Elektro-Prom" No 12

Discusses results of tests conducted at the Apparatus
Lab, Leningrad Electrotech Inst, with tables and
graphs.

20/49T28

AVAKYAN, S. V.

178766

USSR/Electricity - Circuit Breakers
Arc Quenching

Apr 51

"Calculation of the Gas Dynamics in Arc-Quenching
Devices With a Self-Generated Transverse Oil Blast,"
Docent S. V. Avakyan, Cand Tech Sci, Yerevan Polytech
Inst imeni Marx

"Elektrichestvo" No 4, pp 19-28

Proposes anal method for investigating gas dynamics in
arc-quenching devices of circuit breakers. Results of
calc are compared with exptl data. Submitted 24 Nov 50.

178766

AVAKYAN, S.V. and SARADZHEV, V.A.

"Experimental Study of Circumstances Facilitating the Formation of a
Very Short Electric Arc" Sb. Nauch. Tr. Yerevansk. Politekhn. In-ta, NO. 5
1954, 25-34

Physical processes occurring in an electric arc, which appears when electrodes previously at contact are separated, were studied. In spite of published data, an arc between electrodes may occur at potentials below the ionization potential of the gas and below the current limit of 40-to 60 ma. Phenomena of absence of arc at commutation, the kind of ionization in presence of a very short arc and the fusion of electrodes are clarified. (RZhFiz, No 10, 1955)

TETEREVNIKOVA-BABAYAN, Dar'ya Nikolayevna; AVAKYAN, S.V., red.

[Diseases of vegetable and vine crops in Armenia and
measures for their control] Bolezni ovoshche-bakhcheykh
kul'tur v Armenii i mery bor'by s nimi. Erevan, Mitk,
Pt.2. 1965. 357 p.
(MIRA 19:1)

AVAKYAN, Ts.M.; TUMANYAN, V.A.

Theory of the visibility of X rays. Izv. AN Arm. SSR. Biol. i sel'khoz.
nauki 9 no.8:21-28 Ag '56.
(MLRA 9:10)

1. Institut fiziologii Akademii nauk Armyanskoy SSR. 2. Institut
fiziki Akademii nauk Armyanskoy SSR.
(X RAYS)

USSR/Human and Animal Physiology - Sensory Organs.

T-11

Abs Jour : Ref Zhur - Biol., No 7, 1958, 32253

Author : Demirchoglyan, G.G., Adunts, G.T., Avakyan, Ts.M.
Inst : -
Title : Action of Radioactive Phosphorus on the Functional
Dondition of the Retina of the Eye.

Orig Pub : Izv. AN ArmSSR. Biol. i s.-kh. M., 1957, 10, No 2, 3-13.

Abstract : Immersion of a preparation of an isolated frog eye in a
solution of $\text{Na}_2\text{HP}^{32}\text{O}_4$ (strength not indicated) caused
stronger depression of ERG than did immersion of the same
in a solution of Na_2HPO_4 . Sometimes depression of ERG
preceded an increase. With subcutaneous introduction of
 $\text{Na}_2\text{HP}^{32}\text{O}_4$, impairments of the ERG (removed also from the
isolated preparation) set in only through four to ten
days after the introduction. In addition, the accumula-
tion of P^{32} was the same in the retina of an exposed and
unexposed eye.

Card 1/1

EXCEPFTA MEDICA Sec 12/Vol 13/5 Ophthalmology May 59

714. IMPAIRMENT OF RETINAL FUNCTION BY WEAK IRRADIATION (Russian text) - Avakyan T. M. - AKADEMIYA NAUK SSSR 1958, 3/1 (114-116)
Graphs 9

The action of relatively small doses of X-rays on the frog retina was studied, with special attention to the dependence of the size of the b-waves of the ERG on the dose (12, 32 or 130 r.). In control experiments it was shown that this wave becomes progressively smaller (with some fluctuation) in the course of time. Normally the curve does not intersect the abscissa until after 260 min. have passed, but after X-irradiation this happens more rapidly (95 min. with 12 r., 68 min. with 32 r. and 38 min. with 130 r.). The values then fall below the abscissa. It seems as though physical processes underlie the transformation of the positive into a negative potential. Chemical processes are, of course, also involved, in particular the transformation of the SH groups of the protein moiety of the visual purple into S-S groups.

Von Skramlik - Berlin (II, 12)

AVAKYAN, Ts. M.: Master Biol Sci (diss) -- "Changes in the functional properties of the retina under the action of ionizing radiation". Yerevan, 1958. 17 pp (Acad Sci Armenian SSR, Inst of Physiology), 150 copies (KL, No 2, 1959, 119)

AVAKYAN, TS.M.; ADZHYAN, N.S.; ATAYAN, R.R.

Magnet defocusing device for detecting spontaneous ultraweak luminescence of biological substrates. Biofizika 8 no.3:385-387 '63.
(MIRA 17:11)

1. Nauchno-issledovatel'skiy institut zemledeliya, Echmiadzin.

NOR-AREVYAN, N.G.; SEMERDZHYAN, S.P.; NALBANDYAN, Dzh.M.; ATAYAN, R.R.;
AVAKYAN, TS.M.

Effect of the gibberellin solution concentration on the penetra-
tion of radioactive phosphorus into pea sprouts. Izv. AN Arm. SSR.
Biol. nauki 16 no.5:95-97 My '63. (MIRA 17:6)

1. Laboratoriya biofiziki Armyanskogo instituta zemledeliya.

AVAKYAN, TS.M.; KAZARYAN, G.T.

Effect of dinitrophenol on the bielectric activity of the shoots
of Vicia faba. Izv. AN Arm. SSR. Biol. nauki 16 no.11:73-76 N
'63.
(MIRA 17:4)

1. Laboratoriya biofiziki Armyanskogo nauchno-issledovatel'skogo
instituta zemledeliya.

AVAKYAN, R.G.; SEMENYAN, A.I.; KASATKIN, N.R.

Some results of breaking the period of dormancy in freshly harvested potatoes. Radichbiologija 4 no.3:463-464 1964.

(MIRA 17:11)
L. Arzamasliy nauchno-issledovatel'skiy institut zemledelija, gorod Feodosiya.

AVAKYAN, TS.M.

Connection between rhodopsin luminescence and X-ray visibility.
Biofizika 10 no.1:189-191 '65. (MIRA 18:5)

l. Armyanskiy nauchno-issledovatel'skiy institut zemledeliya,
Echmiadzin.

SEMERDZHYAN, S .P.; AVAKYAN, TS.M.

Breaking of dormancy by gibberellin in newly harvested potato tubers. Fiziol.rast. 12 no.1:164-165 Ja-F '65.

1. Laboratoriya biofiziki Nauchno-issledovatel'skogo instituta zemledeliya, Echmiadzin. (MIRA 18:3)

AVAKYAN, V.A.; GUKASYAN, L.A.; NISAKYAN, L.Sh.

Effect of X-ray irradiation on the productivity of potato plants.
Izv. AN Arm. SSR. Biol. nauki 18 no. 4:52-56 By '65.

1. Laboratoriya radiatsionnoy genetiki AN Armeyskoy SSR. (MIRA 18:7)

"APPROVED FOR RELEASE: 06/05/2000

CIA-RDP86-00513R000102520011-9

AVAKYAN, TS.M.; TARUBOV, B.N.; ADZHYAN, S.N.

"Oxygen effect" of bioluminescence. Trudy MOIF. Otd. biol.

21:60-63 '65.

(MIRA 18:6)

APPROVED FOR RELEASE: 06/05/2000

CIA-RDP86-00513R000102520011-9"

AVAKYAN, TS.M.; ADZHYAN, N.S.; KAZARYAN, G.T.

All-purpose automatic units for the production of intracellular
microelectrodes. Izv. AN Arm. SSR. Biol. nauki 18 no.6:93-97
Je '65. (MIFI 18:9)

1. Laboratoriya biofiziki Nauchno-issledovatel'skogo institut'
zemledeliya goroda Echmiadzin.

L 23846-66

ACC NR: AP6015266

SOURCE CODE: UR/0293/65/018/006/0093/0097

AUTHOR: Avakyan, Ts. M.; Adzhyan, N. S.; Kazaryan, G. T.ORG: Biophysics Laboratory, Scientific Research Institute of Farming, Echmiedzin
(Laboratoriya biofiziki NII zemledeliya)

TITLE: All-purpose automatic units for manufacturing intracellular microelectrodes

SOURCE: AN ArmSSR. Izvestiya. Seriya biologicheskikh nauk, v. 18, no. 6, 1965, 93-97

TOPIC TAGS: electrode, circuit design, automatic machine, electronic manufacturing machinery

ABSTRACT: The article describes an automatic machine constructed by the authors for manufacturing intracellular microelectrodes. The circuit diagram and blueprints are given. The construction and operation of the units for preliminary preparation of the capillary tubes and for obtaining the microelectrodes are described. The circuits allow simultaneous control of the operation of both units. Orig. art. has: 3 figures.
[JPRS]

SUB CODE: 09, 06 / SUBM DATE: 27Nov64 / ORIG REF: 003 / OTH REF: 001

Card 1/1 Q.?

TARAYAN, V.M. & AYAKYAN, T.T.

Catalytic reduction of selenic acid. Dokl.AW Arm.SSR 30 no.4:231-
234 '60.
(MIRA 13:8)

1. Institut geologicheskikh nauk Akademii nauk Armyanskoy SSR.
2. Cheln-korrespondent AN Armyanskoy SSR (for Tarayan).
(Selenic acid) (Reduction, Chemical)

TARAYAN, V.M.; AVAKYAN, T.T.

Colorimetric determination of selenium and tellurium in sulfide
ores. Zav.lab. 27 no.8:967-970 '61. (MIRA 14:7)

1. Geologicheskiy institut AN Armyanskoy SSR.
(Selenium--Analysis) (Tellurium--Analysis) (Sulfides)

S/276/63/000/003/006/006
AC04/A127

AUTHOR: Avakyan, V.

TITLE: Method of surface-alloying steel parts in the mold

PERIODICAL: Referativnyy zhurnal, Tekhnologiya mashinostroyeniya, no. 3, 1963, 28, abstract 3G201 (Prom-st' Armenii, 1962, no. 8, 33 - 36, Russian)

TEXT: At the laboratory of Armniimash a method has been developed of producing wear-resistant steel castings by surface-alloying the working surfaces. Prior to pouring, 2 - 3 mm of the alloying charge, ground to 40 - 70 μ and consisting of 70% Al and 30% MoS₂, are placed on the mold bottom. During pouring, the manganese of the base metal enters into combination with sulfur. The freed molybdenum enters into combination with iron (owing to the aluminum pyroeffect), while the sulfurous manganese floats up to the casting surface in the form of slag and is removed. The author presents the results of a spectral analysis of the diffusion layer and the base metal. There are 4 figures, 2 tables and 5 references.

[Abstracter's note: Complete translation]

Card 1/1

AVAKYAN, V.; GRISHCHUK, A.

Using 18XGT steel wastes for manufacturing antifriction
gray iron. Prom.Arm. 5 no.11:35-36 N '62. (MIRA 15:12)

1. Armnimash (for Avakyan). 2. Yerevanskiy zavod
"Gidroprivod" (for Grishchuk).
(Cast iron)

AVAKYAN, V.

Perlite and its use in the construction industry . Prom.Arm. 6 no.7:
11-14 Jl '63.

Antimony-containing cast iron as a substitute for bronze in the man-
ufacture of machinery. 38-42 (MIRA 16:9)

1. Armyanskiy nauchno-issledovatel'skiy institut mashinostroyeniya.

AVAKYAN, V.A.

Degeneration of potatoes. Agrobiologiya no.6:839-845. N-D '60.
(MIRA 13:12)

1. Moskovskaya sel'skokhozyaystvennaya akademiya imeni K.A.Timiryazeva.

(Potatoes—Diseases and pests)

AVAKYAN, V.A.

Biochemic characteristics of healthy and degenerate potatoes.
Izv. AN Arm. SSR. Biol. nauki 14 no.10:75-84 O'61. (MIRA 16:7)

1. Timiryazevskaya sel'skokhozyaystvennaya akademiya, Moskva.
(POTATOES--DISEASES AND PESTS)

AVAKYAN, V.A.

Effect of summer planting on the quality of seed potatoes in the piedmont zone of Armenia. Agrobiologija no.1:51-57 Ja-F '63.
(MIRA 16:5)

1. Akademiya nauk Armyanskoy SSSR, Yerevan.
(ARMENIA—Seed potatoes)

AVAKYAN, V.A.; GUKASIAN, L.A.; AMIRKHANYAN, M.A.

Qualitative difference of the apical and basal ends of
potato tubers. Izv. AN Arm. SSR. Biol. nauki 17 no. 5:
93-98 My '64. (MTRA 17:9)

AVAKYAN, Vache Arshakovich; BABAYAN, V.C., otv. red.

[Scientific bases for the production of seed potatoes]
Nauchnye osnovy prizvodstva semennogo kartofelia.
Erevan', Izd-vo AN Atm.SSR, 1965. 129 p. (MRA 18:8)

ADZHEMYAN, V.G.; AVAKYAN, Y.A.; MANUKYAN, Y.S.

Grinding heads for lathes. Stan. i anstr. 36 no.4:28-29 Ap '65.
(MIRA 18:5)

AVAKYAN, V.A.; ANTONYAN, A.S.; MINOSYAN, R.A.

Results of observations on patients having had typhoid fever and
bacterial carriers at the Sumgait Chemical Plant (1954-1964).
Zhur. mikrobiol., epid. i immun. 42 no.11:135-136 N '65.
(MIRA 18:12)

1. Mediko-sanitarnaya chasty Sumgaitskogo khimicheskogo zavoda,
Azerbaydzhanskaya SSR. Submitted March 9, 1965.

POTAPOV, V.M.; TERENT'YEV, A.P.; AVANYAN, V.G.

Spectropolarimetric analysis. Report No. 1: Quantitative determination of benzaldehyde. Zhur. anal. khim. 18 no.1: 116-120 Ja '63. (MIRA 16:4)

1. Moskovskiy gosudarstvennyy universitet imeni Lomonosova.
(Benzaldehyde) (Spectrum analysis)

KOROLEV, A.I.; MUR, V.I.; AVAKYAN, V.G.

Diels-Adler reaction in a partial asymmetrical synthesis. Zhur. ob. khim.
34 no. 2:708 F '64. (MIRA 17:3)

1. Nauchno-issledovatel'skiy institut organicheskikh poluproduktov i
krasiteley.

AVAKYAN, V. L.

RESEARCH INTO THE NATURE AND SPECTRA
OF PARTICLES PRODUCED BY HIGH ENERGY
NUCLEONS

A. I. Alikhanov, A. V. Khrimyan, V. K. Kosmachevsky
V. L. Avakyan, K. S. Egiyan, Yu. P. Korotkov, N. A.
Nalbandyan

The nature and the momentum spectra of secondary particles produced in lead by fast cosmic nucleons were studied at an altitude of 3,250 m. above sea level by means of a magnetic mass-spectrometer, five-layer proportional counter and five-layer scintillation counter.

The momentum spectra of π^+ -mesons, K-mesons, protons and neutrons, generated by the charged and neutral components of cosmic radiation, are presented.

The spectra of π^\pm -mesons produced by neutrons do not differ from the spectra of π^\pm -mesons produced by fast charged particles. The N^+/\bar{N}^- ratio for π^+ -mesons generated by protons differs from that for π^- -mesons generated by neutrons.

Among the products of stars with momenta up to 720 Mev/c, the number of K-mesons is of the order of 10% of the π^+ -mesons. In the 720 Mev/c range, $N_K/N_\pi > 0.2$.

In the momentum range up to 1,000 Mev/c, an increase in the number of K-mesons is observed with increase in momentum. An evaluation of the σ_n/σ_p ratio was undertaken where σ_n , σ_p are the cross sections of K-meson production by neutrons and protons.

Data are presented on the number of neutrons and protons of different energies in cosmic radiation flux at an altitude of 3,250 metres above sea level.

Report presented at the International Cosmic Ray Conference, Moscow, 6-11 July 1959.

AVAKYAN, V. M.

PA 24/49T54

USSR/Medicine "Diagnosis, Methods
Medicine "Brain, Diseases"

Nov 48

"The Significance of Visceral Semeiotics in the Topical Diagnosis of Diseases of the Cerebral Cortex,"
V. M. Avakyan, R. A. Chilingaryan, Yerevan, 2 pp

"Sov Med" No 11

Visceral semeiotics can be considered a topicodiagnostic indication of cerebral cortex infection. Only gastrointestinal semeiotics are indications of infection of temporal region of cerebral cortex.
Visceral semeiotics can be considered indications of small ulcers affecting the cortex. Disruptions of visceral and somatic functions usually occur during first 2-3 months after onset of infection.

24/49T54

AVAKYAN, V. I.

34114. Deyatel'nost' otechestva Krasnogo Kresta Armyanskoy ssr v period Velikoy Otechestvennoy voyny. Trudy sektora istorii arm. reditsiny i biologii (Akad. nauk Arm. ssr), No. 2, 1949, s. 19-32. - Na arm. yaz.-Rezyume na rus. yaz.

SO: Knizhuaya, Letopis' Vol. 7, 1955

AVAKYAN, V. M.

34149. Avakyan, V. M. Vzglyady d-ra meditsiny V. I. Arustamova o prirode ryb'ego yada. Trudy Sektora istorii arm. meditsiny i biologii (Akad. nauch Arm SSR), No.2 , 1949, s. 53-66. Na arm. yaz--Rezyume na rus. yaz.

SO: Knizhnaya Letopis' No. 6, 1955

AVAKYAN, V. H.

30539

K klinikye atirichyeskikh form ryevmatizma (bolvezni bure) Trudy
Yohyevansk. MyeD. IN-TA, VYP. 6, 1949, S. 60-65

D :Lepotis! No. 34

AVAKYAN, V.M.

Therapy of ulcers with adrenalin. Sovet. med. 17 no.11:
44-45 Nov 1953. (GIML 25:5)

1. Of the Therapeutic Division of Yerevan Third Clinical Hospital (Head Physician -- B.M. Akunts).

AVAKYAN, V.M.; SIMONYAN, S.N.

Experience in detecting and treating hypertension in a city district.
Dokl. AN Arm. SSR 19 no.4:123-128 '54. (MIRA 8:7)

1. Predstavlene L.A. Oganesyanom. (Hypertension)

AVAKYAN, V. M.

U-1

U.S.S.R. / Pharmacology, Toxicology. General Problems.

Abs Jour : Ref. Zh.-Biol. No 2, 1958, No 7876

Author : Avakyan, V.M.

Inst :

Title : Pharmacological Characteristics and Chemical Structure of Certain Amino-ethers of Furan - 2 - Carboxylic Acid.

Orig Pub : Farmakol. i. Toksikologiya, 1956, (1957), Prilozh, Sb. Ref., 19-21.

Abstract : A study was made of Compound 597 (idomethylate of dimethylaminoethyl ether of furan - 2 - carboxylic acid) and its derivatives, in which methyl and alcoxymethyl radicals were introduced into the acid portion and benzyl and ethyl radicals were added to the cationic portion of the molecule. It was determined, by experiments performed on the cat and the

Card : 1/2

AVAKYAN, V. M., Cand of Bio Sci -- (diss) "Pharmacological properties
and chemical structure of certain aminoesters of furancarboxylic acid."
Moscow, 1957, 16 pp, (All-Union Scientific Research Chemicopharmaceutical
Institute im S. Ordzhonikidze), 110 copies (KL, 29-57, 89)

USSR/Pharmacology. Toxicology. Cholinergic Drugs V

Abs Jour : Ref Zhur-Biol., No 8, 1958, 37544

Author : Avakyan V. M.

Inst : Not given

Title : On the Pharmacology of Cholinic Ester of Furan-2-Carboxylic Acid (K farmacologii kholinovovo estera furan-2-Karbonovoy kisloty)

Orig Pub : Farmakol. i toksikologiya, 1957, 20, No 1, 42-48

Abstract : The pharmacological action of the cholinic ester of furan-2-carboxylic acid (1) when administered intravenously to dogs, cats, rabbits, and into isolated organs was studied. In doses of 0.3 to 10 mg/kg it produced a rise in blood pressure; in doses of 0.05 to 5 mg/kg it increased the rate of respiration (12 to 15 mg/kg sharply depressed respiration), and the contraction of the third

Cs Card 1/2

AVAKYAN, V. M.

Role of the pituitary in the action of the iodomethylate of the dimethylaminoethyl ester of furan-2-carbonic acid (preparation 597) on blood pressure [with summary in English]. Farm. i toks. 20 no.5:60-67 S-0 '57. (MIRA 10:12)

1. Otdel farmakologii (zav. - prof. N.D.Mashkovskiy) Vsesoyuznogo nauchno-issledovatel'skogo khimiko-farmacevticheskogo instituta imeni S.Ordzhonikidze.

(PITUITARY GLAND, effect of excision,

on blood pressure responses to furan-2-carbonic acid iodomethylate dimethylaminoethyl ester (Rus))

(BLOOD PRESSURE, effect of drugs on,

furan-2-carbonic acid iodomethylate dimethylaminoethyl ester, role of pituitary (Rus))

(FURAN DERIVATIVES, effects,

furan-2-carbonic acid iodomethylate dimethylaminoethyl ester, on blood pressure, role of pituitary (Rus))

AVAKYAN, V.M.; BADALYAN, G.O.; DRAMPYAN, F.S.; POGOSYAN, S.A.

Normal levels of arterial pressure in the population of Armenia.
Terap. arkh. 29 no.8:36-42 '57. (MIRA 11:4)

1. Iz propedevticheskoy terapevticheskoy kliniki (zav.-deystvitel'nyy chlen AMN SSSR prof. L.A.Oganesyan) i fakul'tetskoy i gosipital'noy terapevticheskikh klinik (zav.-dotsent V.M.Avakan) Sanitarno-gigiyenicheskogo fakul'teta Yerevanskogo meditsinskogo instituta.
(BLOOD PRESSURE,
normal levels in Armenians (Rus))

AVAKYAN, V.M., Doc Med Sci -- (diss) "Data ^{for} the study of ~~the~~ ^{on} hypertension in ~~the~~ early stages of development in young ~~children~~ ^{children}."
Yerevan, 1959. 31 pp (Min of Health ~~of the~~ Armenian SSR. Yerevan
Med Inst). 200 copies (KL,38-59, 119)

70

AVAKYAN, V.N.

Some features of the clinical aspect of hypertension in young patients at early stages of the disease. Izv.AN Arm.SSR.Biol. nauki 12 no.4:55-62 Ap '59. (MIRA 12:9)

1. Kafedra terapii Yerevanskogo meditsinskogo instituta.
(HYPERTENSION)

MNDZHOYAN, A.L.; AVAKYAN, V.M.

Pharmacological characteristics of "chisindamone" - dichloromethylene of N-(β -dimethylaminooethyl)-4,5,6,7-tetrachloroisindoline.
Report No.1. Izv.AN Arm.SSR.Biol.nauki 12 no.7:13-22 Jl '59.

(MIRA 12:10)

1. Institut tonkoy organicheskoy khimii Akademii nauk Armyanskoy SSR.

(ISOINDOLINE--PHYSIOLOGICAL EFFECT)

AVAKYAN, V.M.

Dynamics of hypertension. Izv. AN Arm. SSR. Biol.nauki 12 no.8:
43-49 Ag '59. (MIRA 12:12)

1. Kafedra terapii Yerevanskogo meditsinskogo instituta.
(HYPERTENSION)

MNDZHOYAN, A.L.; AVAKYAN, V.M.

Relationship between the chemical structure and pharmacological effect
in the series of amino esters of 1-phenylcyclopentane-1-carboxylic
acid. Izv. AN Arm. SSR. Biol. nauki 12 no.9:3-11 S '59.
(MIRA 12:12)

1. Institut tonkoy organicheskoy khimii Akademii nauk ArmSSR.
(ANTICONVULSANTS)

AVAKYAN, V.M.

Pharmacological characteristics of "chisindamone" - dichloro-methylate of N-(²-dimethylaminoethyl)-4,5,6,7-tetrachlorois-indoline. Report No.2. Izv.AN Arm. SSR. Biol.nauki 12 no.12: 9-16 D '59. (MIRA 13:6)

1. Institut tonkoy organicheskoy khimii Akademii nauk Armyanskoy SSR.
(ISOINDOLINE)

AVAKYAN, V.M.

Modification of pharmacological properties of acetylcholine by
enlarging (rendering heavier) the acid part of the molecule [with
summary in English]. Farm. i toks. 22 no.1:20-27 Ja-F '59.
(MIRA 12:4)

1. Otdel farmakologii (zav. - prof. M.D. Mashkovskiy) Vsesoyuznogo
nauchno-issledovatel'skogo khimiko-farmatsevticheskogo instituta
imeni S. Ordzhonikidze.

(ACETYLCHOLINE, rel. cpds.

cpds. with enlarged acid chain, pharmacol. aspects
(Rus))

MASHKOVSKIY, M.D.; AVAKYAN, V.M.

Pharmacology of 5-ethoxymethylfuran-2-carboxylic acid dimethylaminoethyl iodomethylate. Farm. i toks. 22 no.6:506-512 N-D '59.

(MIRA 13:5)

1. Otdel farmakologii (zav. - prof. M.D. Mashkovskiy) Vsesoyuznogo nauchno-issledovatel'skogo khimiko-farmatsevticheskogo instituta imeni S. Ordzhonikidze i Instituta teorii organicheskoy khimii AN Armyanskoy SSR (dir. - akademik AN Armyanskoy SSR A.L. Mnzhoyan).
(MUSCLE RELAXANTS pharmacol.)
(FURAN)

AVAKYAN, V.M., dotsent; GASPARYAN, Ye.I., dotsent; AVETISYAN, N.O., assistent;
KANDAKOVA, I.A., vrach

Results of a three-year study of the changes in the functions of
some organs and systems in workers in the chloroprene industry.
Trudy Erev.med.inst. no.11:241-245 '60. (MIRA 15:11)

1. Iz kafedry terapii sanitarno-gigiyenicheskogo fakul'teta (zav.
kafedroy - dotsent V.M.Avakyan) Yerevanskogo meditsinskogo instituta.
(CHLOROPRENE—TOXICOLOGY) (MEDICINE, INDUSTRIAL)

AVAKYAN, V.M., dotsent

Blood changes in the early stages of hypertension. Trudy Erev.med.
inst. no.11:247-249 '60. (MIRA 15:11)

1. Iz kafedry terapii sanitarno-gigiyenicheskogo fakul'teta (zav.
kafedroy - dotsent V.M.Avakyan) Yerevanskogo meditsinskogo instituta.
(HYPERTENSION) (BLOOD--EXAMINATION)

AVAKYAN, V.M., dotsent; GASPARYAN, Ye.I., dotsent; AVETISYAN, N.O., assistant;
GRIGORYAN, Ye.M., vrach

Dynamics of cardiovascular system changes in workers in shops
using the chloroprene group. Trudy Erev.med.inst. no.11:237-239
'60. (MIRA 15:11)

1. Iz-kafedry terapii sanitarno-gigiyenicheskogo fakul'teta (zav.
kafedroy - dotsent V.M.Avakyan) Yerevanskogo meditsinskogo
instituta.

(CARDIOVASCULAR SYSTEM--DISEASES)
(CHLOROPRENE--TOXICOLOGY)

AVAKYAN, V.M.

Biochemical changes during early stages of hypertension. Izv.
AN Arm. SSR. Biol. nauki 13 no.8:71-75 Ag '60. (MIRA 13:9)

1. Kafedra terapii Yerevanskogo meditsinskogo instituta.
(HYPERTENSION)

AVAKYAN, V.M.

Effect of tcipenam and pentaphen on blood pressure and respiration;
studies on the peripheral effect of the preparations. Izv. AN Arm.
SSR. Biol. nauki 14 no.9:73-82 S '61. (MIRA 14:9)

1. Institut tonkoy organicheskoy khimii AN Armyanskoy SSR.
(ANTICONVULSANTS) (PARASYMPATHOLYTICS)

BLAVATSKAYA, Ye.D., kand.med.nauk; AVAKYAN, V.M., dotsent

Condition of the fundus oculi in the early stages of hypertension
in young persons. Oft. zhur. 16 no.1:16-20 '61. (MIRA 14:3)

1. Iz glaznoy kliniki (sav. - prof. B.N.Melik-Musyan [deceased])
i terapeuticheskoy kliniki Yerevanskogo meditsinskogo instituta.
(EYE) (HYPERTENSION)

AVAKYAN, V.M.

Method for studying the effect of preparations on ganglia of the vasoconstrictive sympathetic nerves. Izv. AN Arm. SSR. Biol. nauki 15 no.3:39-45 '62. (MIRA 15:4)

1. Institut tonkoy organicheskoy khimii AN Armyanskoy SSR.
(NERVOUS SYSTEM, SYMPATHETIC)

MNDZHOYAN, A.L.; AVAKYAN, V.M.

Comparative pharmacological study of hisindamone A and
hisindamone B. Zhur. eksp. i klin. med. 3 no.5:3-11 '63.
(MIRA 17:2)

1. Institut tonkoy organicheskoy khimii AN Armyanskoy SSR.

AVAKYAN, Varden Markarovich

[Hypertension] [Gipertonicheskaya bolezn']. Erevan, Gos.
izd-vo Armianskoi SSR] 1963. 193 p. [In Armenian]
(MIRA 17:4)

AVAKYAN, V.M.; CHILINGARYAN, A.G.

Search for preparations blocking the adrenoreceptors in
the benzofuran derivative series, Izv. AN Arm. SSR. Biol.
nauki 16 no.12:3-10 D '63. (MIRA 17:2)

1. Institut tonkoy organicheskoy khimii AN Armyanskoy SSR.

MNDZHOYAN, A.L.; AVAKYAN, V.M.

Searching for ganglionic blocking agents in the
N-alkyl-N-benzofurfuryl-N, N-dialkylpolymethylenediamine
series. Izv. AN Arm. SSR. biol. nauki 16 no.8:3-14 Ag'63
(MIRA 17:4)

1. Institut tonkoy organicheskoy khimii AN Armyanskoy SSR.

AVAKYAN, V.M.

Pharmacological characteristics of xylocholine and bretylium,
sympatholytic preparations of a new type of action. Izv. AN
Arm. SSR. Biol. nauki 16 no. 2;31-40 F '63. (MIRA 17;7)

1. Institut tonkoy organicheskoy khimii AN Armyanskoy SSR.

AVAKYAN, V.M.; CHILINGARYAN, A.A.

Method for the study of the effect of pharmacological agents
on vasomotor nerve ganglia of the extremities. Farm. i toks.
25 no.6:750-752 N-D '62. (MIRA 17:8)

1. Institut tonkoy organicheskoy khimii (dir. - akademik AN
Armyanskoy SSR A.L. Mndzhoyan) AN Armyanskoy SSR.

AVAKYAN, V.M.

In search for new sympatholytic compounds among the derivatives
of xylocholine, bretylium, and guanethidine. Izv. AN Arm. SSR.
Biol. nauki 16 no.6:11-26 Je '63.

1. Institut tonkoy organicheskoy khimii AN Armyanskoy SSR.
(MIRA 17:10)

AVAKYAN, V.M.

Effect of cyperazin and pentaphene on the central nervous system.
General effects and toxicity of both preparations. Farm. i
tots. 26 no.5:543-551 S-0 '63. (MIRA 17:8)

J. Institut tenkoy organicheskoy khimii AN Armyanskoy SSR.

MNDZHOYAN, A.L.; AVAKYAN, V.M.; MANUKYAN, L.A.

Relation between the chemical structure and antiarrhythmic effect in the series of dialkylaminostyrylamides, morpholyl- and piperidyl-propylamides of -alkylaminobenzoic acid.
Izv. AN Arm. SSR. Biol. nauki 17 no. 1:19-26 Ja '64.
(MIRA 17:7)

1. Institut tonkoy organicheskoy khimii AN Armyanskoy SSR.

AVAKYAN, V.M.

Differentiated treatment of hypertension in its various stages. Zhur.eksp.i klin.med. 4 no.5:21-30 '64.

(MIRA 18:11)

1. Kafedra terapii pediatriceskogo i sanitarno-gigiyenicheskogo fakul'tetov Yerevanskogo meditsinskogo instituta.

AVAKYAN, V.M.; MANUKYAN, L.A.

Comparative study of the pharmacological properties of diiamide
and novocaine amide. Zhur. eksp. i klin. med. 5 no.1:25-32 '65.
(MIRA 18:10)

AVAKYAN, V.M.; KALTRIKYAN, A.A.

Destruction of catechol amine resources in postganglionic
sympathetic nerve endings. Izv. AN Arm.SSR, Biol.nauki 19
no.10:17-22 O '65. (MIRA 18:12)

1. Institut tonkoy organicheskoy khimii AN Armyanskoy SSR.
Submitted April 16, 1965.

L 31851-66 EWT(1) RO

ACC NR: AP6021316

(N) SOURCE CODE: UR/0390/65/028/005/0542/0546

29

AUTHOR: Avakyan, V. M.; Vlasenko, E. V.

ORG: Institute of Fine Organic Chemistry, AN ArmSSR, Yerevan (Institut tankoy B
organicheskoy khimii AN ArmSSR)

TITLE: Certain aspects of the effect produced by bretilium and octatensin on neuromuscular conduction

SOURCE: Farmakologiya i toksikologiya, v. 28, no. 5, 1965, 542-546

TOPIC TAGS: pharmacology, central nervous system, cat, myology, drug

ABSTRACT: The development of muscular weakness upon administration of bretilium (darentin) and octatensin (guanetedine) can be explained by at least three different mechanisms: direct suppression by the preparations of muscular tissue, disturbance of the excitation transmission in the region of neuromuscular synapse (curare-like), and disturbance of excitation transmission in the central nervous rings (mephenesine-type). This investigation attempts to show the point of application of the action of bretilium and octatensin. Bretilium and octatensin failed to produce any direct inhibitory action on the skeletal muscles of hexobarbital-anesthetized cats. The preparations exhibit a short-term curareform activity and cause long depression of reflex contractions. The development of muscular weakness observed during the clinical application of britilium and octatensin can be explained by their inhibitory action on the excitation transmission through neuromuscular and central synapses. Orig. art. has: 2 figures. [JPRS]

SUB CODE: 06 / SUBM DATE: 24Jun64 / ORIG REF: 005 / OTH REF: 013

Card 1/1 15 UDC: 615.717-092.259:612.816.3+612.816.3.014.46:615.717

AVAKYAN, V.R.

Investigating the performance of jointing machines equipped with a mechanical feed device in mechanized woodwork production lines. Trudy Len. lessotekh. akad. no. 82 pt. 2:85-110 '57. (MIRA 11:9)
(Woodworking machinery)

AVAKYAN, V. R. Cand Tech Sci -- (diss) "Study of the ^{operation} of jointing machines (with mechanical feed devices) in the technological process of mechanical-joinery production" Len, 1958. 23 pp with ^{diagrams}; 1 sheet of tables (Min of Higher Education USSR. Len Order of Lenin Forestry Engineering Acad im S. M. Kirov), 150 copies (KL, 36-58, 112)

AVAKYAN, V.S.; GRISHCHUK, A.P.

Making antifriction cast iron with use of 18KhGT steel
scrap. Lit. proizv. no.1:31 Ja '63. (MIRA 16:3)
(Bearing metals)

05460
SOV/120-59-3-31/46

AUTHORS: Karabekov, I. P., Avakyan, V. V., and Nalbandyan, N. A.
TITLE: On the Characteristics of the GK-7 Hodoscopic System
(O kharakteristikakh godoskopicheskoy sistemy GK-7)
PERIODICAL: Pribory i tekhnika eksperimenta, 1958, Nr 3,
pp 130-132 (USSR)

ABSTRACT: The GK-7 hodoscopic system has been investigated experimentally with the aim of using it in a magnetic mass spectrometer. The main characteristics of the GK-7 "cells" are given, as well as an analysis of the factors which limit the application of this system in the region of small pulses (less than 10 v) from Geiger-Muller counters. The effect of the magnetic field on the working of GK-7 is also considered. A typical hodoscopic "cell" of the GK-7 system is shown in Fig 1. A negative pulse from a G.M. counter is applied to the cathode of an MTKh-90 tube. This leads to an increase of the silent discharge current between the control anode and the cathode. A master pulse 2-3 μ s long then appears at the main anode of the MTKh-90 and if it coincides with the current pulse in the control anode circuit which is produced by the pulse from the counter, a discharge is triggered between the main anode and the cathode. This leads to the appearance

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S/058/61/000/010/021/100
A001/A101

AUTHORS: Khrimyan, A.Y., Kosmachevskiy, V.K., Avakyan, V.V., Gorodkov, Yu.V.,
Yegikyan, K.Sh., Nalbandyan, N.A.

TITLE: Investigation of the nature and spectra of particles produced by
high-energy nucleons

PERIODICAL: Referativnyy zhurnal. Fizika, no. 10, 1961, 97, abstract 10B507 ("Tr.
Mezhdunar. konferentsii po kosmich. lucham, 1959, v. 1", Moscow, AN
SSSR, 1960, 183 - 187)

TEXT: The authors present the results of investigating particles with mo-
menta up to 900 Mev/c produced in lead by high-energy nucleons of cosmic radia-
tion at an altitude of 3,200 m above sea level (the Aragats mountain, Armenia).
The ionizing capability of individual particles was determined with an average
accuracy of $\pm 14\%$ by means of a gas counter and of $\pm 10\%$ by means of five scin-
tillation counters.

L. Dorman

[Abstracter's note: Complete translation]

Card 1/1

AVAKYAN, V. V., NALBANDYAN, N. A., EGYAN, K. SH., PLESHKO, M. P.,

KHRIMYAN, A. V., Asatiani, T. L.

"The Composition of the Flux of the Cosmic Ray Nuclear-Active
Particles of Momenta Higher than 1.8 Gev/c at the Altitude of
3250 m Above Sea Level."

report submitted for the Intl. Conf. on Cosmic Rays and Earth Storm (IUPAP)
Kyoto, Japan 4-15 Sept. 1961.

AVAKYAN, V.V.

33141
S/120/61/000/006/007/041
E032/E114

21.6000

AUTHORS: Khrimyan, A.V., Yegiyan, K.Sh., Nalbandyan, N.A.;
Avakyan, V.V., and Karapetyan, V.A.

TITLE: Measurement of charged-particle masses with the aid
of scintillation counters

PERIODICAL: Pribory i tekhnika eksperimenta, no.6, 1961, 52-56

TEXT: The method can be used to (a) select particles which stop in the scintillator owing to ionization losses, and (b) to determine the mass of the particles by measuring their energy and range in the scintillator. The device consists of a telescope of n scintillation counters (C_1, \dots, C_n) with thickness ℓ_1, \dots, ℓ_n respectively. If a particle which has passed at an angle of φ through $k - 1$ scintillators has come to rest in the scintillator C_k at a depth ℓ_x , and at the end of its range in the $m + 1$ scintillators C_{k-m}, \dots, C_k the energy losses $\Delta E_{k-m}, \dots, \Delta E_k$ were due to ionization only, then it can be shown that:

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Measurement of charged-particle ...

$$\frac{\Delta E_{k-i}}{\Delta E_{k-(i+1)}} = f_i \left(\frac{\Delta E_{k-(i+1)}}{\Delta E_{k-(i+2)}}, \ell_{k-1}, \dots, \ell_{k-(i+2)} \right) \quad (1)$$

(i = 0, ..., m - 2)

This holds whatever the nature of the particle, the direction of its motion, and range in the last scintillator C_k . Thus, by measuring the energies $\Delta \xi_1, \dots, \Delta \xi_n$ in the scintillators C_1, \dots, C_n one can select with the aid of Eq.(1) all those particles which come to rest in the scintillators C_{k-m}, \dots, C_k by losing energy in ionization processes only.

For stable particles $\Delta \xi_i = \Delta E_i$. If on the other hand a primary particle decays (or is captured) in the scintillator C_k then the energy liberated in C_k is $\Delta \xi_k = \Delta E_k + \delta E_k$ where the latter quantity is the energy of the secondary particles. In this case the first equation ($i = 0$) in Eq.(1) can only be used for the determination of the unknown energy:

$$\Delta E_k = \Delta \xi_{k-1} f_0 (\Delta \xi_{k-1} / \Delta \xi_{k-2}) \quad (4)$$

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Measurement of charged-particle... S/120/61/000/006/007/041
 EO32/E114

and the remaining relations in Eq.(1) are used to select the ionization stoppages. The energy loss of a particle with an ionizing power I/I_{\min} in the scintillator C_1 is given by:

$$\Delta \xi_i = B (I/M_{\min}) C_i \ell_i \text{ MeV} \quad (5)$$

where B is in MeV/cm and represents the minimum ionization loss in the particular scintillator, and ℓ_i is the thickness of the scintillator C_i in cm. Thus the energy lost by a particle before stopping in scintillators C_{k-m}, \dots, C_k is given by

$$E = \sum_{i=k}^{k-m} \Delta \xi_i$$

If Eq.(1) is not satisfied for $i = 0$, then

$$E = \sum_{i=k-1}^{k-m} \Delta \xi_i + \Delta E_k \quad (6)$$

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E032/E114

Measurement of charged-particle...

where ΔE_k is given by Eq.(4). The range of a particle in the scintillators C_{k-m}, \dots, C_k is given by:

$$R = \left(\sum_{i=k-1}^{k-m} \ell_i + \ell_x \right) \cosec \varphi \quad (7)$$

in which all the quantities except ℓ_x are known. If the scintillators are looked upon as simple filters then

$$\ell_x = 1/2 \ell_k \pm 1/2 \ell_{k-1}$$

ℓ_x can also be determined from a relation of the form:

$$\ell_x = F(f_o, \ell_{k-1}, \ell_{k-2}) \quad (3)$$

In order to verify the above method the authors have used the results obtained with the instrument described by A.I. Alikhanov, A.V. Khrimyan, V.K. Kosmachevskiy, V.V. Avakyan, Yu.V. Gorodkov, K.Sh. Yegiyan and N.A. Nalbandyan (Ref.6: Proceedings of the International Conference on Cosmic Rays, 1959, 1960, v.1.. 183)

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Measurement of charged-particle ... S/120/61/000/006/007/041
 E032/E114

The instrument consists of a magnetic mass spectrometer, a five-layer proportional counter (A.I. Alikharov, V.A. Lubimov, G.P. Elisiyev, CERN Symposium, v.2, 1956, 87) and five scintillation counters (V.K. Kosmachevskiy and M.S. Aynuddinov, PTE, no.3, 1956, 49). The rms error in the momenta between 0.2 and 1 GeV/c was approximately 8 to 5% for protons and 2 to 4% for π -mesons. The ionizing power of the particles could be measured with the proportional counter to an average accuracy of $\pm 14\%$. For particles stopping in the scintillation counters the average losses in the scintillators could be measured to $\pm 10\%$. Preliminary results indicate that the efficiency of selection of particles which come to rest owing to ionization only is about 0.8. The average accuracy with which the masses can be determined from the energies and ranges is approximately 20%. The statistics on which these results are based are limited and therefore the results are only preliminary. The experiment did not confirm the possibility of investigating the masses and decays of unstable particles. The method may find wide-ranging applications and is amenable to automation. Acknowledgments are Card 5/6

Measurement of charged-particle ...

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S/120/61/000/006/007/041
E032/E114

expressed to A.I. Alikhanov and A.I. Alikhanyan for interest and discussions, and to Yu.V. Gorodkov, M.P. Lorikyan, I.P. Karabekov, K.A. Khurshudyan, G.P. Matevosyan, V.V. Truzyan, E.V. Patvakanyan, G.M. Smsaryan, A.A. Oganesyan and B.V. Tovmasyan for assistance in the organisation and execution of this work.

There are 4 figures and 11 references: 5 Soviet-bloc and 6 non-Soviet-bloc. The four most recent English language references read as follows:

Ref.2: J.W. Keuffel, R.L. Call, W.H. Sandmann, M.O. Larson.
Phys. Rev. Letters, v.1, 1958, 203.

Ref.4: Phys. Rev., v.114, 1959, 1150.

Ref.5: E. Birman, R. Lea, J. Orear, S. Rosendorff.
Phys. Rev., v.113, 1959, 710.

Ref.7: J. Steinberger, 1958 Annual International Conference on High Energy Physics at CERN, Geneva, 1958.

ASSOCIATION: Fizicheskiy institut AN ArmSSR
(Physics Institute, AS Armenian SSR)

SUBMITTED: April 3, 1961
Card 6/6

S/048/62/026/006/005/020
B125/B112

AUTHORS: Khrimyan, A. V., Avakyan, V. V., Nalbandyan, N. A.,
Yegiyan, K. Sh., and Pleshko, M. P.

TITLE: Composition of the nuclear active cosmic radiation particle
current in the momentum range exceeding 1.8 Bev/c at
3250 m above sea level. I.

PERIODICAL: Akademiya nauk SSSR. Izvestiya. Seriya fizicheskaya, v. 26,
no. 6, 1962, 722 - 727

TEXT: The relative number of pions present in the current of nuclear
active cosmic radiation particles was determined for momenta above 1.8 Bev,
at an altitude of 3250 m on the Aragats mountain in Armenia. A magnetic
mass spectrometer (6850 oe) was used, the measuring apparatus comprising
also a five-layer gas proportional counter and five scintillation
counters. The electrons, the muons, and the particles produced in the
measuring apparatus itself were screened out. The first series of
measurements recorded mainly the particles absorbed by the filters and
their secondary products. In the second series all particles were re-
corded. At $p = 1.8$ Bev, 65 positively charged particles were recorded,

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Composition of the nuclear...

after which the number dropped to 4 particles at 11.2 Bev. One negative particle each was measured at 1.8 and 2.2 Bev, two were recorded at 11.2 Bev. Fig. 2 shows the spectrum obtained in the second series of measurements. Only 3% of the particles recorded in the momentum range 1.8 to 22 Bev/c were negative. The ratio N_{π^+}/N_{π^-} for momenta above 1.8 Bev does not differ considerably from the ratio in the interval up to 720 Mev/c. The pion portion in all nuclear active particles in the momentum interval is, however, $6 \pm 2\%$, or 10% at most. At momenta above 2 Bev/c the relative number of K-mesons, protons, and deuterons cannot be determined by the method of "ionization-momentum" or by the method used in the present paper. There are 2 figures and 2 tables. The most important English-language reference is: G. Bozoki, E. Fenyves, L. Janossy, Nucl. Phys., 24, 412 (1961). ↙

ASSOCIATION: Fizicheskiy institut Akademii nauk ArmSSR (Physics Institute of the Academy of Sciences ArSSR)

Card 2/2

38969

S/048/62/026/006/019/020
B125/B102

9.6150

AUTHORS: Khrimyan, A. V., Yegiyan, K. Sh., Nalbandyan, N. A.,

Avakyan, V. V., and Karapetyan, V. A.

TITLE: On the measurement of masses of charged particles by means
of scintillation countersPERIODICAL: Akademiya nauk SSSR. Izvestiya. Seriya fizicheskaya,
v. 26, no. 6, 1962, 831-836

TEXT: A group of scintillation counters can be used to determine the stoppings due to ionization losses and the masses (range-energy measurement). The apparatus here used comprised a magnetic mass spectrometer ($H = 6850$ oe), a five-layer proportional counter and five scintillation counters. After measuring the energies released from the particle in the scintillators C_1, \dots, C_n with the thicknesses l_1, \dots, l_n ($n \geq 3$) the stoppings due to ionization losses were distinguished from the nuclear interactions by applying the criterion

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B125/B102

On the measurement of masses ...

$$\frac{\Delta E_{k-i}}{\Delta E_{k-(i+1)}} = f_i \left(\frac{\Delta E_{k-(i+1)}}{\Delta E_{k-(i+2)}}, l_{k-1}, \dots, l_{k-(i+2)} \right) \quad (i=0, \dots, m-2)$$

$\Delta E_{k-m}, \dots, \Delta E_k$ are the energy losses in the scintillators c_{k-m}, \dots, c_k . The four quantities momentum, ionization power, range and energy are measured by this device. From these, the mass of the particles is found by the momentum - ionization and range - energy methods. The mass spectrum as measured by the first method has a maximum at $\sim 1780 m_e$ and that obtained from the second method a maximum at $\sim 1850 m_e$.

In both cases a weak deuteron spectrum appears between $3500-4500 m_e$. The stoppings due to ionization are identified with an efficiency of ~ 0.8 . The stoppings due to other causes are eliminated with an efficiency of $\sim 0.9-1$. This method was tested by the devices available at the time and can undoubtedly be improved upon by more perfect selection and use of apparatus. Its applicability to decay processes and to mass measurements of unstable particles has not yet been confirmed experimentally. There are 4 figures. The most important English-language reference is:

Stenberger J. 1958 Annual International Conference on High Energy Physics at CERN, Geneva, 1958.

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On the measurement of masses ...

S/048/62/026/006/019/020
B125/B102

ASSOCIATION: Fizicheskiy institut Akademii nauk ArmSSR (Physics Institute of the Academy of Sciences ArSSR)

Card 3/3

S/048/62/026/006/020/020
B181/B104

AUTHORS: Khrimyan, A. V., Yegiyan, K. Sh., Nalbandyan, N. A.,
Avakyan, V. V., and Karapetyan, V. A.

TITLE: Mass measurements of low-intensity charged-particle groups
by various methods

PERIODICAL: Akademiya nauk SSSR. Izvestiya. Seriya fizicheskaya, v. 26,
no. 6, 1962, 837- 840

TEXT: The mass of particles produced by the action of cosmic rays was determined from (1) momentum and ionization, (2) momentum and length of path, (3) momentum and energy, (4) ionization and energy, (5) ionization and length of path, (6) energy and length of path. The experimental arrangement (A. V. Khrimyan, V. V. Avakyan, N. A. Nalbandyan, K. Sh. Yegiyan, M. P. Pleshko, present publication, p. 722) consisted of a mass spectrometer, a proportional counter, two scintillation counters for determining the energy and length of path, and three scintillation counters for determining the energy losses of scattered particles. (2) and (3) gave masses too high, (4), (5); and (6) masses too small for the 203

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B181/B 104

protons, 11 deuterons, and 3 muons and pions observed. Methods (2) through (6) give correct results only if non-ionizing energy losses are detected with sufficient reliability. As it is difficult to construct the necessary apparatus (high ionization gradient in very flat Wilson chambers, very thin-walled counting tubes, etc.), preference should be given to method (1). There is 1 figure.

ASSOCIATION: Fizicheskiy institut, Akademii nauk ArmSSR (Physics Institute of the Academy of Sciences ArSSR)

Card 2/2

24.6700

16555
S/056/62/042/003/005/049
B117/B112

AUTHORS: Khrimyan, A. V., Avakyan, V. V., Nalbandyan, N. A.,
Yegian, K. Sh., Pleshko, M. P.

TITLE: Composition of nuclear-active cosmic-ray particles with
momenta above 1.8 Bev/c at an altitude of 3250 m above sea
level. I

PERIODICAL: Zhurnal eksperimental'noy i teoreticheskoy fiziki, v. 42,
no. 3, 1962, 669 - 674

TEXT: The nature and momentum spectra of nuclear-active cosmic-ray
particles in the momentum range above 1.8 Bev/c were studied on Mount
Aragats (Armenia) at an altitude of 3250 m above sea level in order to
determine the relative number of pions in the particle flux. The investi-
gations were made with a magnetic mass spectrometer of 6850 oe including
a hodoscope, a thin-walled five-layer proportional counter, and five
scintillation counters. The momenta from 2 to 20 Bev/c were determined
with a mean square error from 10 to 80%. The ionizing power of individual
particles was determined with a mean error of \pm 14% (gas counter) and

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S/056/62/042/003/005/049
B117/B112

± 10% (scintillation counters). Electrons, muons, and the particles produced in the device were not taken into account. Two series of measurements were carried out: (1) coincidences I + II + III + IV + V - XIII and recording of particles absorbed by the filters together with their secondary products; (2) coincidences I + II + III + IV + V and recording of all the particles. The results of both series could be used to determine the relative number of pions in the cosmic-ray particle flux.
Results: In the momentum range of 1.8 - 22 Bev/c, which contains 95 - 98% of the particles with momenta ≥ 1.8 Bev/c, negative particles comprise about 3% of all the particles. In the momentum range of 100 - 720 Mev/c, the ratio $N_+ / N_- = 0.90 \pm 0.15$ was obtained for the nuclear-active cosmic-

ray particle flux. In the momentum range of 1.8 - 22 Bev/c, pions account for $6 \pm 2\%$ of all the nuclear-active particles. On the assumption that also the five particles with unknown sign, observed above 1.8 Bev/c, are pions, the latter comprise not more than 10% of the nuclear-active cosmic-ray particles at 3250 m above sea level. The results are consistent with published data (Ref. 11: N. M. Kocharyan, G. S. Saakyan, Z. A. Kirakosyan, ZhETF, 35, 1335, 1958; Ref. 18: G. M. Garibyan, I. I. Gol'dman, ZhETF, 26,

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Composition of nuclear-active...

S/056/62/042/003/005/049
B117/B112

257, 1954). It is noted that the determination of K-mesons, protons, and deuterons requires other methods. In the range ≥ 2 Bev/c, these particles cannot be determined by measuring the ionization and momentum, or by the method applied here. Professor A. I. Alikhanyan is thanked for valuable hints, and V. Sh. Kamalyan, Yu. V. Gorodkov, I. P. Karabekov, B. N. Moiseyev, G. G. Matevosyan, E. V. Patvakanyan, G. M. Smsarayan, K. A. Khurshudyan, V. S. Truzyan, and N. A. Marutyan for assistance. There are 2 figures and 18 references: 10 Soviet and 8 non-Soviet. The four most recent references to English-language publications read as follows: A. G. Barkov, V. Chamany, D. M. Haskin, P. I. Jain, E. Lohrmann, M. W. Teucher, M. Schein, Phys. Rev., 122, 617, 1961; I. H. Atkinson, W. N. Hess, V. Perez-Menez, R. W. Wallace, Phys. Rev. Lett., 2, 168, 1959; P. H. Barrett, Phys. Rev., 114, 1374, 1959; G. Bozoki, E. Fenyves, L. Janossy. Nucl. Phys., 24, 412, 1961.

ASSOCIATION: Fizicheskiy institut Akademii nauk Armyanskoy SSR (Physics Institute of the Academy of Sciences Armyanskaya SSR)

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Card 3/3

A. V. KHRIMYAN, V. V. AVAKYAN, M. P. PLESHKO, G. V. KHRIMYAN

Composition of Cosmic Radiation Flux of Nuclear-active Particles at 3250m above sea level

report submitted for the 8th Intl. Conf. on Cosmic Rays (IUPAP), Jaipur, India,
2-14 Dec 1963

KHRIMYAN, A.V.; AVARYAN, V.V.; PASHINSKII, M.V.; KHREBANOV, G.V.

Composition of a flux of nuclear-active cosmic ray particles
at an altitude of 3250 m. above sea level. Izv. AN SSSR,
Ser. fiz. 28 no.11:1803-1816 N '64.

(MIRA 17:12)

I. Fizicheskiy institut Gosudarstvennogo komiteta po ispol'zovaniyu
atomnoy energii SSSR.

AVAKYAN, V.V.; TRYKHANKIN, I.D.

Continuous straightening of an abrasive wheel on a ball-grinding machine. Biul.tekh.-ekon.inform.Ccs.nauch.-issl.inst.nauch.i tekh.inform. 18 no.5:29-30 My '65. (MTRA 18:6)

L 2629-66 EWT(l)/EWT(m)/FCC/T/EWA(h) IJP(c) GW

ACCESSION NR. AP5026238

UR/0048/65/029/010/1956/1961

AUTHOR: Khrimyan, A.V.; Avskyan, V.V.; Fleshko, M.P.; Vartanyan, T.G.

TITLE: Investigation of low-energy charged particles with the Cosmos 12¹⁷, Cosmos 15¹⁷ and Electron 2 satellites /Report, Ali-Union Conference on Cosmic Ray Physics held at Apatity 24-31 August 1964/

SOURCE: AN SSSR. Izvestiya. Seriya fizicheskaya, v. 29, no. 10, 1965, 1956-1961

TOPIC TAGS: primary cosmic ray, secondary cosmic ray, cosmic ray shower, proton interaction, pi meson

ABSTRACT: The authors, continuing earlier work of one of them (Zh. eksper. i teor. fiz., 35, 1976, 1958), have investigated the production of showers in matter by high energy protons and pions in order to acquire data for estimating the secondary background due to the surrounding material in rocket and satellite measurements of primary cosmic radiation. The measurements were performed at Aragats at an altitude of 3200 m above sea level. The investigated protons and pions were produced in lead by cosmic ray neutrons; their momenta were determined with the aid of a magnetic field, and their ionizing powers were measured with a sequence of five gas-

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filled proportional counters. After passing through the magnetic field and the proportional counters, the secondary particle entered an "interaction hodoscope," consisting of a layer of polystyrene, three thin ($\sim 15 \text{ g/cm}^2$) layers of lead, and four thick ($\sim 43 \text{ g/cm}^2$) layers of copper, with counter trays between them. The data are presented graphically as momentum versus ionizing power plots for the particles that exhibited different specific types of behavior in the interaction hodoscope. From the data presented it is concluded that 15% of the events recorded by a detector surrounded by $10-50 \text{ g/cm}^2$ of heavy metal will be shower events, that the probability of producing a penetrating shower increases with increasing momentum of the initiating particle, that a pion with momentum between 0.1 and 0.7 Bev/c is from two to four times more likely to produce a shower than is a proton of the same momentum, and that it will be difficult to identify primary cosmic ray electrons or γ -rays by observing the showers they produce unless the secondary particles are identified. "The authors express their gratitude to G.V.Khrimyan for discussing the results and for valuable remarks, and to G.G.Matevosyan, E.V.Patvakanyan, G.M. Sargsyan, V.S.Truzyan, and A.A.Oganessyan for assistance with the work." Orig. art.

has: 3 figures and 1 table.

[15]

ASSOCIATION: none

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